

C L A I M S

What is claimed is:

1. Restaurant automation system (RAS) comprising,

5 a) a restaurant compute server for making operational
a server application comprising

 i) data storage of restaurant operations data,
comprising inventory and menu information, comprising
a list of food offerings and prices associated
10 therewith, and

 ii) means for calculating a bill for a selection
of food offerings, said server in wireless
communication with

 b) a kitchen order display,

15 c) a pay station comprising bill payment means, and

 d) a plurality of portable wireless menu means
comprising

 i) a display of food offerings, and prices, and

 ii) means for transmitting a wireless message
20 comprising a selection of the food offerings and
table ID to the wireless server, which transmits the
message to the kitchen order display, and

 iii) means for transmitting a compute command to
the server, which calculates a bill for the food items

selected on the menu means, and transmits the computed
bill to the payment station;
wherein each diner may be provided with a portable wireless
menu means from which to order food, and request a bill, at
5 the time determined by the diner.

2. RAS of Claim 1, wherein the menu information further
comprises pictures of food offerings.

10 3. RAS of Claim 1, wherein the menu information further
comprises a display of nutritional content.

4. RAS of Claim 1, wherein the menu information further
comprises a display of the chef's background.

15 5. RAS of Claim 1, wherein the menu information further
comprises a display of the restaurant history.

6. RAS of Claim 1, wherein the kitchen order display
20 further comprises means for transmitting a message to the
server that preparation is completed for a selected food
offering, and it is ready to be served.

7. RAS of Claim 1, the kitchen order display further comprises a touch screen w/ touch activated location for transmitting a "prep started" message for a particular food offering to server, which message is accessible from the
5 wireless menu means from which the selection was made.

8. RAS of Claim 1, wherein the kitchen order display further comprises means to print food offering selections transmitted from the server.

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9. The kitchen order display of Claim 8, further comprising a touch screen print command.

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10. RAS of Claim 1, wherein the server application further comprises display of bill for food offerings selected.

11. RAS of Claim 1, wherein the server application further comprises a display of the bill for selections made on another wireless menu means.

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12. RAS of Claim 1, wherein the server application further comprises means for calculating a bill.

13. RAS of Claim 1, wherein the server application further comprises means for displaying advertising on the E-menus.

14. An E-menu of the RAS of Claim 1, wherein server
5 application further comprises means for accessing the Internet.

15. RAS of Claim 1, server application further comprising menu modify function operable thru a menu modify screen, to
10 upgrade food offerings and billing, on the E-menus.

16. RAS of Claim 15, wherein menu modify screen has touch screen commands.

15 17. RAS of Claim 1, wherein the server application further comprises mean to collate orders received from particular table.

18. RAS of Claim 17, further comprising means to collate
20 late orders with earlier order.

19. RAS of Claim 1, wherein the server application further comprises means for requiring confirmation of an order placed on a particular menu.

5 20. RAS of Claim 1, wherein the server application further comprises filtering means for selecting among categories of food offerings.

21. RAS of Claim 1, wherein the server application further
10 comprises means for transmitting fast and easy updates to the menu means.

22. RAS of Claim 1, server application further comprises means for customizing the design of the menu.

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23. RAS of Claim 1, wherein the server application permits simultaneous viewing of two or more separate windows in the screen of the E-menu.

20 24. RAS of Claim 1, wherein the E-menu permits simultaneous viewing of two or more separate windows in the screen of the E-menu.

25. RAS of Claim 1, wherein the server application further comprises a means for adjusting a bill.

26. RAS of Claim 1, wherein portable wireless menu means
5 comprises an E-menu with a Dot Matrix Screen.

27. RAS of Claim 1, wherein portable wireless menu means comprises an E-menu with a touch activated LCD screen.

10 28. RAS of Claim 1, wherein the E-menu further comprises a second touch activated LCD screen, hinged to the first.

29. RAS of Claim 27, wherein the LCD screens is foldable.

15 30. RAS of Claim 27 wherein the LCD screen is rollable

31. RAS of Claim 1, wherein portable wireless menu means comprises an E-menu with a first touch activated OLED
screen.

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32. RAS of Claim 31, wherein the E-menu further comprises a second touch activated OLED screen, hinged to the first.

33. RAS if Claim 31 wherein the OLED screen is foldable.

34. RAS of Claim 31 wherein the OLED screen is rollable.

5 35. RAS of Claim 1, wherein the wireless menu means
further comprises a hyper-text linked, touch activated
display of menu information.

36. RAS of Claim 1, wherein the wireless menu means
10 further comprises means for checking the status of the
preparation of an offering selected.

37. RAS of Claim 1, wherein the wireless menu means
further comprises means for transmitting a "selection
15 cancelled" message to KITCHEN ORDER DISPLAY, which further
comprises means to display said message.

38. RAS of Claim 1, the wireless menu means further
comprises a means to disable the order send function.

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39. RAS of Claim 1, wireless menu means further comprises
means for requesting a separate check for the items ordered
on that menu means.

40. An E-menu of the RAS of Claim 27, wherein said LCD screen is foldable.

41. An E-menu of the RAS of Claim 27, further comprises
5 low battery indicator.

42. An E-menu of the RAS of Claim 27, wherein the E-menu further comprises battery charging contacts

10 43. An E-menu of the RAS of Claim 27, wherein the E-menu further comprises brightness/contrast controls.

44. An E-menu of Claim 1, further comprising wireless network interface embedded in E-menu.

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45. RAS of Claim 1, wherein the Payment Station further comprises means for making credit card payment.

46. RAS of Claim 1, wherein the Service Management
20 Function of the RAS Server further comprising data storage of messages transmitted on system, and means for reviewing the data to evaluate restaurant.

47. RAS of Claim 1, further comprising a Central Server for transmitting and receiving data from a Central Services Center, said Central server in communication with at least the RAS of Claim 1.

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48. RAS of Claim 47, wherein the Central Server further comprises means to analyze the data received from one or more RAS systems.

10 49. RAS of Claim 1, wherein the RAS Server functions further comprise a Customer Personal Benefit System, and means for entering a dinner ID for a patron, and means for assigning benefits to the diner ID.

15 50. RAS of Claim 49, further comprising means for a diner to request an ID.

51. RAS of Claim 1, wherein the Payment Station further comprises means for a diner to enter a Customer Personal
20 Benefit ID.

52. RAS of Claim 1, wherein the Payment Station further comprises means for displaying the Table Status function.

53. RAS of Claim 49, further comprising means for directing advertising messages to menus according to the data store of info related to diner ID.

5 54. A Waiter Call System (WCS) for the RAS of Claim 1, comprising a Table Call Unit (TCU) with particular service call buttons, which operate to illuminate service call lights.

10 55. WCS of Claim 54, wherein the TCU service lights further comprise decorative component.

56. WCS of Claim 54, wherein the TCU further comprises a timer display for displaying the time elapsed since
15 activation of a service call button

57. WCS of Claim 54, wherein the TCU further comprises a table ID signal transmitter, and the WCS further comprises a Call Status Display.

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58. WCS of Claim 54, wherein the TCU further comprises a table ID signal RFID swipe device, for electro-magnetically affixing a table ID to the E-Menu.

59. A Waiter Call System (WCS) for a restaurant, said WCS comprising a Table Call Unit (TCU) comprising a plurality of service call buttons, each associated with a particular service, which operate to illuminate a plurality of service call lights.

60. The WCS of Claim 59, wherein the TCU further comprising a decorative component illuminated by the service call lights.

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61. The WCS of Claim 59, wherein the TCU further comprises a timer display displaying the time elapsed since activation of a service call button.

15 62. The WCS of Claim 59, wherein the TCU further comprises a table ID signal transmitter and the waiter call system further comprises a call status display which displays the table ID and service requests for that table.

20 63. The WCS of Claim 59, further comprising a server in wireless communication with the TCU.

64. RAS of Claim 1, further comprising a Reception Management system (RMS), comprising a Reception Management Display, and the RAS Server application further comprises a Reception Management System application which comprises
5 means for entering and displaying reservations, and means for calculating expected wait times.

65. RAS of Claim 64, wherein the RMS further comprising means for diner to enter queue for table of particular
10 size.

66. RAS of Claim 64, wherein the RMS further comprises a Reservation Display, displaying existing reservations, and means to enter new reservations.

15 67. RAS of Claim 64, wherein the RMS further comprises means for calculating and displaying the expected wait time for an occupied table.

20 68. RAS of Claim 64, wherein the RMS further comprises means to associate a *table ready* message with a particular table.

69. RAS of Claim 68 wherein the RMS further comprises means to assign a reservation to an open table, and means for communication the assignment to the diners.

5 70. RAS of Claim 69, wherein the means of communication is flashing lights.

71. RAS of Claim 68, wherein the RMS further comprises means for directing diners associated with a reservation to
10 the table assigned to the reservation.

72. RAS of Claim 71, wherein the means for directing, comprises flashing lights located in the vicinity of the table.

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73. RAS of Claim 71, wherein the means for directing comprises a map.

74. RAS of Claim 64, further comprising means for
20 displaying a plot of the tables, and means for a diner to select a particular table.

75. An order automation system (AOS) comprising:

(a) a computer server having a memory unit for storing menu data comprising menu items which may be ordered;

(b) a first T/R device connected to server for transmitting said menu data and receiving order commands;

5 and

(c) a plurality of menu tablets each having a graphic display, input means for receiving order commands from a user and a second (T/R device), said second T/R device, in communication with said first T/R device, for receiving
10 said menu data from, and transmitting said order commands to, said server;

the improvement wherein the input means is a touch activated LCD screen.

15 76. The AOS of Claim 75, wherein said LCD screen is foldable.

77. The AOS of Claim 75, menu data further comprising a price for each menu item.

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78. The AOS of Claim 77, further comprising a pay station, in communication with said server, for receiving price

tally commands; and said second T/R transmitting price
tally commands from said tablets to said server.

79. The AOS of Claim 78, further comprising a central
facility comprising a central computer in communication
5 with at least one order automation system, said central
computer having a memory unit for storing the order
commands from a number of order automation systems, and
payment information associated therewith.

10 80. The AOS of Claim 79, wherein the central computer
memory unit further stores payment information associated
with the order commands.

81. The AOS of Claim 75, wherein the graphic display
15 transmitted from the server comprises pictures of the menu
items.

82. The AOS of Claim 75, wherein the graphic display
transmitted from the server comprises compatibility
20 information for the menu items.

83. The AOS of Claim 75, further comprising a facility's
order display in communication with said server, for

receiving and displaying order commands received from the computer server.

84. The AOS of Claim 83, wherein said facility's order
5 display further comprises a graphic display, and a third
(T/R device) in communication with said first T/R device,
for receiving said order commands, and transmitting an
order work started command to the server.

10 85. The AOS of Claim 83, wherein said facility's order
display further comprises a third transmitting and
receiving device (T/R device) in communication with said
second T/R device, for receiving said order commands, and
transmitting a "food preparation started" command to the
15 server.

86. The AOS of Claim 83, wherein said facility's order
display further comprises a third transmitting and
receiving device (T/R device) in communication with said
20 second T/R device, for receiving said order commands, and
transmitting a "food preparation completed" command to the
server.

87. The AOS of Claim 85, and wherein the diner can check the status of food preparation via an E-Menu.

88. The AOS of Claim 75 wherein the menu tablets further
5 comprise a low battery indicator.

89. The AOS of Claim 75 wherein the menu tablet further comprises battery charging contacts.

90. The AOS of Claim 75 wherein the menu tablets further
10 comprise brightness/contrast controls.

91. The AOS of Claim 75 wherein the menu tablet further
comprises means for accessing and viewing the Internet
15 connection of the server.

92. An order automation (AOS) system:

(a) a computer server having a memory unit for storing menu data comprising menu items which may be ordered;

20 (b) a first T/R device connected to server for transmitting said menu data and receiving order commands;
and

(c) a plurality of menu tablets each having a graphic display, input means for receiving order commands from a user and a second (T/R device), said second T/R device, in communication with said first T/R device, for receiving
5 said menu data from, and transmitting said order commands to, said server;

the improvement wherein the menu tablets comprise means for sensing the location of the tablet within the facility.

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93. AOS of Claim 92, wherein said menu tablet comprising a foldable LCD screen.

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94. AOS of Claim 92, wherein said menu data further comprising a price for each menu item.

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95. AOS of Claim 94, further comprising a pay station, in communication with said server, for receiving price tally commands; and said second T/R transmitting price tally commands from said tablets to said server.

96. AOS of Claim 94, further comprising a central facility comprising a central computer in communication with at

least one order automation system, said central computer having a memory unit for storing the order commands from a number of order automation systems, and payment information associated therewith.

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97. AOS of Claim 95, wherein the central computer memory unit further stores payment information associated with the order commands.

10 98. AOS of Claim 92, wherein the graphic display transmitted from the server comprises pictures of the menu items.

15 99. AOS of Claim 92, wherein the graphic display from the server comprises compatibility information for the menu items.

100. AOS of Claim 92, further comprising a facility's order display in communication with said server, for
20 receiving and displaying order commands received from the computer server.

101. AOS of Claim 100, wherein said facility's order display further comprises a graphic display, and a third (T/R device) in communication with said first T/R device, for receiving said order commands, and transmitting a "food preparation started" command to the server.

102. AOS of Claim 100, wherein said facility's order display further comprises a third device (T/R device) in communication with said second T/R device, for receiving said order commands, and transmitting a "food preparation started" command to the server.

103. AOS of Claim 100, wherein said facility's order display further comprises a third device (T/R device) in communication with said second T/R device, for receiving said order commands, and transmitting a "food preparation completed" command to the server.

104. AOS of Claim 102, and wherein the diner can check the status of food preparation via an E-Menu.

105. AOS of Claim 92 the menu tablet further comprising a low battery indicator.

106. AOS of Claim 92 the menu tablet further comprising battery charging contacts.

5 107. AOS do Claim 92, the menu tablet further comprising brightness/contrast controls.

108. AOS of Claim 92 the menu tablet further comprising means for accessing and viewing the Internet connection of
10 the server.

109. An order automation system comprising, in combination:

(a) a computer server having a memory unit for storing
15 menu data comprising menu items which may be ordered;

(b) a first T/R device connected to server for transmitting said menu data and receiving order commands;
and

(c) a plurality of menu tablets each having a graphic
20 display, input means for receiving order commands from a user and a second transmitting and receiving device (T/R device), said second T/R device, in communication with said first T/R device, for receiving said menu data from, and

transmitting said order commands to, said server; the improvement wherein the menu tablets have no CPU.

110. AOS of Claim 109, wherein said menu tablet comprises
5 a foldable LCD screen.

111. AOS of Claim 109, wherein said menu data further comprises a price for each menu item.

10 112. AOS of Claim 111, further comprising a pay station, in communication with said server, for receiving price tally commands; and said second T/R transmitting price tally commands from said tablets to said server.

15 113. AOS of Claim 112, further comprising a central facility comprising a central computer in communication with at least one order automation system, said central computer having a memory unit for storing the order commands from a number of order automation systems, and
20 payment information associated therewith.

114. AOS of Claim 113, wherein the central computer memory unit further stores payment information associated with the order commands.

5 115. AOS of Claim 109, wherein the graphic display transmitted from the server comprises pictures of the menu items.

116. AOS of Claim 109, wherein the graphic display
10 transmitted from the server comprises compatibility information for the menu items.

117. AOS of Claim 109, further comprising a facility's order display in communication with said server, for
15 receiving and displaying order commands received from the computer server.

118. AOS of Claim 117, wherein said facility's order display further comprises a graphic display, and a third
20 transmitting and receiving device (T/R device) in communication with said first T/R device, for receiving said order commands, and transmitting an order work started command to the server.

119. AOS of Claim 117, said facility's order display further comprises a third transmitting and receiving device (T/R device) in communication with said second T/R device, for receiving said order commands, and transmitting a "food
5 preparation started" command to the server.

120. AOS of Claim 117, said facility's order display further comprises a third transmitting and receiving device (T/R device) in communication with said second T/R device,
10 for receiving said order commands, and transmitting a "food preparation completed" command to the server.

121. AOS of Claim 119, and the diner can check the status of food preparation via an E-Menu.

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122. AOS of Claim 109 the menu tablet further comprising a low battery indicator.

123. AOS of Claim 109 the menu tablet further comprising
20 battery charging contacts.

124. AOS of Claim 109 the menu tablet further comprising brightness/contrast controls.

125. AOS of Claim 109 the menu tablet further comprising means for accessing and viewing the Internet connection of the server.

5 126. An order automation system for a restaurant, comprising, in combination:

(a) a computer server having a memory unit for storing menu items which may be ordered;

(b) a first transmitting and receiving device (T/R device) connected to said server for transmitting said menu data and receiving order commands;

(c) a plurality of ordering menus each having input means for receiving order commands, and a second transmitting and receiving device (T/R device), said second T/R device, in communication with said first T/R device, for transmitting said order commands to, said server;

(d) a plurality of viewing menu tablets each having a touch activated screen, and a re-programmable memory for a rich content, hypertext-linked, graphic display of restaurant information comprising descriptions of menu items; and means for reprogramming the tablet memory, in communication with a reprogramming input port;

(e) a viewing menu docking station, for reprogramming the viewing menu memory, said docking station in communication with said server, and comprising at least one interface port, which locks to the reprogramming input port
5 of the viewing menu;

(f) a kitchen order display, in communication with the computer server, for displaying the selection of menu items ordered.

10 127. The order automation system of claim 126, wherein the ordering menus receive menu data from the server.

128. The order automation system of claim 126, further comprising means for reprogramming menu items on the
15 server.

129. The order automation system of Claim 110, wherein the viewing menu docking station is connected to the server.

20 130. The order automation system of claim 126, wherein said ordering menus further comprise means for transmitting comments regarding the order to the server.

131. The order automation system of claim 126, wherein the kitchen order display further comprises means for transmitting a "prep started" message to the server, and the ordering menus further comprise means for receiving
5 said message from the server.

132. The order automation system of claim 126, wherein the kitchen order display further comprises means for transmitting an "order ready" message to the server, and
10 the ordering menus further comprise means for receiving said message from the server.

133. The order automation system of claim 126, wherein the ordering menus further comprise means for free flowing
15 digitalized text messages.

134. The order automation system of claim 126, further comprising a waiter call system as in Claim WCS1.

20 135. The order automation system of Claim 126, further comprising a docking station for reprogramming a viewing tablet in the docking station, said docking station

connected to said server, and said viewing tablet being re-programmable from the order display.

136. The order automation system of Claim 126, further
5 comprising a docking station for reprogramming a viewing
tablet, in the docking station, said docking station
connected to said server, and said viewing tablet being re-programmable from an ordering menu.